

Application No. 10/509,327
Reply to Office Action of March 7, 2006

IN THE DRAWINGS

The attached sheet of drawings includes changes to Figs 8 and 13. These sheets, which include Figs. 7-18, replace the original sheets including Figs. 7-18.

Attachment: Replacement Sheets

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the current amendments and the following discussion, is respectfully requested.

Claims 1-19 are pending in the present application, Claims 1-19 having been amended. Claims 1-19 are amended to correct grammatical informalities and to better conform to U.S. claim drafting practice. Applicants respectfully submit that no new matter is added.

In the outstanding Office Action, the drawings were objected to; the specification was objected to; Claims 5, 6, 11, and 12 were objected to; Claims 1-8 and 11-12 were rejected under 35 U.S.C. §102(b) as anticipated by Gandel et al. (U.S. Patent No. 6,593,734, hereinafter Gandel); Claims 9 and 10 were rejected under 35 U.S.C. §103(a) as unpatentable over Gandel; and Claims 13-19 were objected to for depending from a rejected base claim, but were otherwise indicated to include allowable subject matter.

Applicants thank the Examiner for the indication of allowable subject matter. However, these claims have been presently maintained in dependent form because Applicant considers the pending independent claim patentably distinguishing over the applied art.

With respect to the objection to the drawings, the drawings are amended to add the corresponding legend for Figs. 8 and 13. Accordingly, Applicants respectfully request that the objection to the drawings be withdrawn.

With respect to the objection to the specification, the specification is amended to include section headings. Accordingly, Applicants respectfully request that the objection to the specification be withdrawn. In addition, a new Abstract is provided.

With respect to the objection to Claims 5, 6, 11, and 12, these claims are amended to more clearly describe and distinctly claim the subject matter regarded as the invention. Accordingly, Applicants respectfully request that the objection to the claims be withdrawn.

In a non-limiting embodiment of the claimed invention, an angular-position magnetic-sensor device includes at least one stator and one rotor. A space between said stator and said rotor, defining over substantially 360°, is a main air gap including at least two movable magnetic poles of alternating polarities. The stator includes at least one secondary air gap in which there is placed at least one magnetosensitive element. The stator includes two pole shoes having angular widths that are substantially equal to 120° and 240° respectively, and the two magnetic poles each have an angular width substantially equal to 120°. Thus, an angular position sensor, adapted for detecting fairly large travel (i.e., the angular rotation of the rotator about the stator) up to a maximum amount of 240°, is provided.

With respect to the rejection of Claim 1 as anticipated by Gandel, Applicants respectfully traverse the rejection. Claim 1 recites, *inter alia*, “wherein said stator includes two pole shoes having angular widths that are substantially equal to 120° and 240° respectively.” Gandel does not disclose or suggest at least this element of Claim 1.

The outstanding Office Action equates stator pieces (3, 4) of Gandel to the claimed “stator.”¹ As recited in Claim 1, the stator includes two pole shoes having angular widths that are substantially equal to 120° and 240° respectively. Stator pieces (3, 4) of Gandel do not have angular widths that are substantially equal to 120° and 240°. As shown in Fig. 11 of Gandel, stator pieces (3, 4) have an identical angular size, and cannot be 120° and 240°.

Furthermore, col. 11, lines 36-45 of Gandel discloses that the stator includes two ferromagnetic pieces, and each ferromagnetic piece has a length Xs equal to at least Xc. Since each ferromagnetic piece has an identical length Xs, one piece cannot have an angular width of 120° while the other piece has an angular width of 240°.

¹ Office Action, page 7.

- Application No. 10/509,327
- Reply to Office Action of March 7, 2006

Furthermore, Applicants respectfully submit that a person of ordinary skill in the art, using the disclosure of Gandel, would not be able to design or make a sensor adapted for measuring rotation of a stator of more than 180°. This is evidenced by:

- Gandel's disclosure that the two stator pieces (3, 4) have the same angular width X_s;² and
- Gandel's disclosure that X_s should be at least equal to X_c, the chosen amount of travel (i.e., angular rotation of the rotor about the stator).³

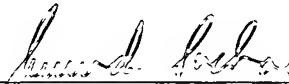
Thus, X_c cannot be greater than 180°, as it is not possible to provide two stator pieces with angular widths greater than 180°.

In view of the above-noted distinctions, Applicants respectfully submit that Claim 1 (and Claims 2-19 dependent thereon) patentably distinguish over Gandel.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
Attorney of Record
Registration No. 25,599

Surinder Sachar
Registration No. 34,423

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

² Gandel, Fig. 11.

³ Gandel, col. 11, lines 36-45, and col. 6, lines 4-5.